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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,453	02/21/2002	David Puig-Oses	020276	1015

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QUALCOMM INCORPORATED  
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SAN DIEGO, CA 92121

EXAMINER
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HALIYUR, VENKATESH N

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/081,453	<b>Applicant(s)</b> PUIG-OSSES ET AL.	
	<b>Examiner</b> Venkatesh Haliyur	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed on 09/28/2006 has been considered. Applicant's arguments, see Remarks, filed on 09/28/2006, with respect to the rejection(s) of claim(s) 1,3,5,6,8,9 under 35 U.S.C 102(e) and rejection(s) of claim(s) 2,4,7 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Das et al. Rejections follow.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
3. Claims 1-9 are pending in the application.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 1 is rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter. For compliance it is suggested that lines 3-4 of claim 1 is changed to read as "a computer-readable memory element; and a processing element configured to execute a set of computer-executable instructions stored on the said computer-readable memory element, the set of said instructions for:" Appropriate corrections to claim 1 is required.

***Claim Rejections - 35 USC § 112***

6. Claims 1,2,5,8,9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

7. The terms or phrase like, "favorable", "not favorable " and "unfavorable" in claims 1,5,8,9 are used by the claims to mean the signal transmission over a transmission channel is reliable or not, while the accepted meaning is "signal transmission over a

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transmission channel is reliable or unreliable when a certain measure of a signal quality value of the transmission channel is determined and compared against an acceptable SNR or SINR value (threshold value)". Hence these terms or phrases are indefinite because the specification does not clearly redefine them. Appropriate corrections are required in the claims as applicable.

8. The phrase "velocity estimate" in claim 2 is used by the claim to mean velocity estimates of remote stations traveling at a high speed, while the accepted meaning is "velocity estimates of the remote stations traveling at a high velocity are determined by Doppler frequency estimation method". Hence the phrase is indefinite and appropriate correction is required in claim 2.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Das et al [US Pat: 7,116,944].

Regarding claims 1,5 Das et al. disclosed in their invention of "Method and Apparatus for Feedback Error Detection in a Wireless Communications Systems" disclosed an apparatus for controlling the operation of a quality feedback channel in a wireless communication system (**Figs 1-3**), comprising: a memory element; and a processing element configured to execute a set of instructions stored on the memory element (**Fig 1, col 3 lines 35-67, col 4, lines 1-45**), the set of instructions for: determining a channel quality value associated with a transmission channel (**channel quality estimator, item 126 of Fig 1**); determining a condition of the transmission channel (**item 206 of Fig 2**); if the transmission channel condition is favorable (**SNR/SINR value**) then transmitting the channel quality value over one slot. (**with few CQI/ACI bits in common time slot**) of the channel quality feedback channel (**item 134 of Fig 1, col 4, lines 43-67, col 5, lines 1-67**); if the channel condition is not favorable (**SNR/SINR value**), then transmitting the channel quality value over a plurality of slots (**CQI/ACI bits in additional time slots**) of the channel quality feedback channel (**col 5, lines 22-67, col 6, lines 1-34**); and determining a transmission rate of the channel quality value over the feedback channel (**FBI is transmitted in an agreed upon set of time slots**) based on the condition of the transmission channel (**col 6, lines 36-67**) [**Figs 1-3, cols 1-6, lines 1-67**].

Regarding claims 2-4, Das et al. disclosed the condition of the transmission channel is based upon a velocity estimate (**speed of the mobile station, col 8, lines 26-51**) and the condition of the transmission channel is based upon a power level estimate, wherein the condition of the transmission channel is based upon whether a

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fast fade occurs (**degradation of signal strength**) in the transmission channel (**col 5, lines 22-62**).

Regarding claim 6, Das et al disclosed that transmitting the channel quality value over more than one slot of the feedback channel further comprises: repeating the channel quality value over a frame of the feedback channel (**Figs 4-6, col 7, lines 65-67, col 8, lines 1-67, col 9, lines 1-59**).

Regarding claim 7, Das et al disclosed that the channel condition is unfavorable (**to send CQI/ACI**) if a first station (**mobile station**) and a second station (**base station**) travel at a high velocity in relation to each other (**changing distance between the mobile station and base station**), wherein the first station originates the feedback channel and the second station originates the transmission channel (**col 8, lines 40-50**).

Regarding claims 8,9, Das et al. disclosed a method for improving the reception of a channel quality value at a base station (**item 710 of Fig 7**), comprising: determining whether the condition of a feedback channel (**item 734 of Fig 7**) from a remote station (**mobile station, item 720 of Fig 7**) is favorable (**SNR/SINR value**); if the condition of the channel is unfavorable (**SNR/SINR value**), then transmitting a control signal (**pilot signal, 736 of Fig 7**) to the remote station (**Figs 7-9, cols 10, lines 1-67, col 11, lines 1-2**), wherein the control signal (**pilot signal**) triggers a reduced rate mode for transmitting the channel quality value over a feedback channel from the remote station; if the condition of the channel is favorable (**SNR/SINR value**), then allowing the remote station to control the transmission of the channel quality value over the feedback channel determining a transmission rate of the channel quality value

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over the feedback channel based on the condition of the transmission channel (**Figs 1-3, continuously adjust transmission from base station, col 6, lines 35-67,col 7, lines 1-67, col 8, lines 1-9).**

### ***Response to Arguments***

11. Applicant's arguments, see remarks filed on 09/28/06 with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached @ (571)-272-3139. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For



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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Venkatesh Haliyur

Patent Examiner

UH  
10/19/06



RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER